Prifysgol Wrecsam
Wrexham University

Module specification

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Module Code	CONL709
Module Title	Mobile App Development
Level	7
Credit value	15
Faculty	FACE
HECoS Code	100956
Cost Code	GACP
Pre-requisite module	N/A

Programmes in which module to be offered

Programme title	Core/Optional/Standalone
MSc Computer Science with Software Engineering	Core
MSc Computer Science with User Experience	Core

Breakdown of module hours

Learning and teaching hours	15 hrs
Placement tutor support hours	0 hrs
Supervised learning hours e.g. practical classes, workshops	0 hrs
Project supervision hours	0 hrs
Active learning and teaching hours total	**15 hrs**
Placement hours	0 hrs
Guided independent study hours	135 hrs
Module duration (Total hours)	**150 hrs**

Module aims

This module will focus on the design and implementation of mobile apps. This will enable the student to develop an understanding of the current technical issues; in the development of mobile apps, including hardware and software considerations, development and implementation and the selection of appropriate programming languages. Students will be encouraged to consider the design and development of an effective presence on mobile devices. In addition, the balance between security, the user interface, performance, and accessibility will be examined, and the problems associated with updateable data explored.

Module Learning Outcomes

At the end of this module, students will be able to:

1	Critically evaluate the properties and capabilities of modern mobile devices and the specific issues related to software development.
2	Demonstrate an in-depth understanding of accessibility and compatibility issues within the development of mobile apps.
3	Use a current development environment to design, develop, deploy and debug an appropriate app on a mobile device using best practice.
4	Develop an app for multiple devices using the appropriate languages and development tools.

Assessment

Indicative Assessment Tasks:
This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

Assessment 1: The first is practical. You will be required to develop an Android app using the Android Studio IDE in the Kotlin programming language

Assessment 2: The second is a written assignment which requires you to chronicle your experience of developing your Assignment 1 app in a report that details your development journey, from initial concept to testing.

Assessment number	Learning Outcomes to be met	Type of assessment	Duration/Word Count	Weighting (%)	Alternative assessment, if applicable
1	1, 2, 3, 4	Practical	2,250 words (Equivalent)	75%	N/A
2	1, 2, 3	Written Assignment	750 words	25%	N/A

Derogations

N/A

Learning and Teaching Strategies

The overall learning and teaching strategy is one of guided independent study requiring ongoing student engagement. Online material will provide the foundation of the learning resources, requiring the students to log in and engage regularly throughout the eight weeks of the module. There will be a mix of suggested readings, discussions and interactive content containing embedded digital media and self-checks for students to complete as they work through the material and undertake the assessment tasks. A range of digital tools via the virtual learning

environment and additional sources of reading will also be utilised to accommodate learning styles. There is access to a helpline for additional support and chat facilities through Canvas for messaging and responding.

Welsh Elements

Students can present their work, access forms, resources, email correspondence, work placements and personal tutorials in Welsh.

Indicative Syllabus Outline

- Introduction to Android Studio
- Activities and Intents
- Services and Broadcast Receivers
- Data Storage and Networking
- User Interface Design
- Testing and Deployment
- Advanced Topics

Indicative Bibliography

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads:

N. Smyth, *Android Studio Essentials - Kotlin Edition,* Scotts Valley, CA: Payload Media, Inc., 2023

Other indicative reading:

https://developer.android.com/courses/android-basics-compose/course

https://developer.android.com/guide/components/bound-services

https://appdevelopermagazine.com/How-to-choose-an-android-http-library

https://www.youtube.com/watch?v=uRwQKikomtE

https://developer.android.com/guide/topics/data

https://developer.android.com/develop/connectivity/network-ops

https://developer.android.com/training/testing/fundamentals

https://developer.android.com/training/testing/fundamentals/what-to-test

https://developer.android.com/training/testing/fundamentals/test-doubles

https://developer.android.com/codelabs/advanced-android-kotlin-training-testing-basics

Administrative Information

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